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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,444	09/16/2003	Toshiyuki Terada	A1585.0009	9828
32172	7590	07/20/2005	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 1177 AVENUE OF THE AMERICAS (6TH AVENUE) 41 ST FL. NEW YORK, NY 10036-2714			SAWHNEY, HARGOBIND S	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/662,444	Applicant(s) TERADA ET AL.	
	Examiner Hargobind S. Sawhney	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on May 4, 2005 has been filed. Accordingly:
 - The specification has been amended;
 - Claims 1-5 have been amended; and
 - New claims 6-16 have been added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommers (US Patent Application Pub. No.: US 2003/0180037 A1) in view of Arai et al. (US Patent No.: 5,287,135) and Choi et al. (US Patent No.: 5,313,188).

Note:

Claim 1, lines 13-15, the functional recitation " thereby light is made convergent with a half reduction angle longer side of the photograph." has not been given patentable weight because it is a narrative in form. In order to be given patentable

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weight, a functional recitation must be expressed as a “means” for performing the specific function, and must be supported by the recitation in the claim of sufficient structure to warrant the presence of the functional language.

Sommers (US Patent Application Pub. No.: US 2003/0180037 A1), hereinafter referred as Sommers, discloses a photographic light source device (Figures 2 and 4) comprising:

- a light source including a plurality of white light emitting diodes (LEDs) 12 (Figures 2 and 4, Para.0021) having a combination a fluorophor converting blue light, generated by blue LED to yellow light (Figures 2 and 4, Para. 0028);
- the plurality of white LEDs 12 arranged in a row parallel with the longitudinal direction (Figure 4, Para. 0026);
- a lens including fresnel cuts (Figures 1, 2 and Para. 0032)

However, Sommers does not teach the fresnel cuts being linear cuts applied parallel to the arrangement direction of the LED elements - parallel with the longitudinal direction of the photograph – detailed above.

On the other hand, Arai et al. ('135) discloses a built-in flash system F for a camera (Figure 16) including a lens 22 having linear fresnel cuts parallel the longitudinal axis of the flash (Figure 16, column 14, lines 1-4).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the photographic light source device of Sommers by providing the

fresnel lens with linear cuts as taught by Arai et al. ('135) for the benefits of forming the radiation light into the parallel light towards the horizontal direction.

In addition, Sommers does not teach a drive performance with a current between 3-50 times the rated current of the LED elements, and the lighting time duration between 10-600 ms.

On the other hand, Choi et al. ('188) discloses an LED light including super luminescent LED light having drive performance (Figure 1) with current 300 ma - which is significantly larger than the rated current of 20 ma of the LEDs -, with the lighting duration less than 1 ms.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the LED drive performance of Choi et al. ('188) for a current between 3-50 times the rated current of the LED elements, and lighting duration between 10-600 ms, since it has been held that discovering an optimum value of result effective variables involves only routine skill in the art.

In addition, it would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the photographic light source device of Sommers by providing LED drive performance as taught by Choi et al. ('188) optimized as indicated above, for the benefits and advantages of significantly larger light flux output for short time duration.

Regarding Claim 2, Sommers in view of Arai et al. ('135) and Choi et al. ('188) discloses the light source device further including other type of LEDs – interpreted as red light LEDs -(Figures 2 and 4, Para. 0028).

Regarding claims 4 and 10, Sommers in view of Arai et al. ('135) and Choi et al. ('188) discloses the light source device further including:

- the white LEDs 12 using an LED element generating blue light; and
- the LEDs 12 arranged in a matrix having a number of rows and a number of columns equal to at least the number of primary colors (Figure 4, Para. 0026).

Regarding Claim 6, Sommers in view of Arai et al. ('135) and Choi et al. ('188) discloses the light source device including three white LEDs. However, neither combined nor individual teaching of Sommers, Arai et al. ('135) and Choi et al. ('188) discloses the light source device including specifically 4 to 8 white LEDs.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the light source of Sommers in view of Arai et al. ('135) and Choi et al. ('188) by providing 4 to 8 white LEDs, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sommers (US Patent Application Pub. No.: US 2003/0180037 A1) in view of Arai et al. (US Patent No.: 5,287,135) and Choi et al. (US Patent No.: 5,313,188) as applied to claim 1 above, and further in view of Chan (US Patent No.: 4,666,276).

Neither combined nor individual teaching of Sommers, Arai et al. ('135) and Choi et al. ('188) discloses the light source device further including an electrical contact with spring between the case and the mobile device.

On the other hand, Chan ('276) discloses a hot shoe attachment 14 with a camera 12 (Figure 1, column 2, lines 40- 44), the hot shoe attachment further including a spring 52 urging contact with for electrical connection with the camera (Figures 1 and 2, column 3, lines 47-50). Note: The use of springs in a hot shoe of a flash is well known in the camera art for positive electrical contact.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the photographic light source device of Kawakami in view of Choi et al. ('188) by providing the hot shoe with spring elements as taught by Chan ('276) for the benefits and advantages of providing positive and secure structural contact for reliable electrical connection needed for operation of the device.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sommers (US Patent Application Pub. No.: US 2003/0180037 A1) in view of Arai et al. (US Patent No.: 5,287,135) and Choi et al. (US Patent No.: 5,313,188) as applied to claim 1 above, and further in view of Kimura et al. (US Patent No.: 5,739,552).

Sommers, Arai et al. ('135) and Choi et al. ('188) discloses the light source device including a plurality of white light LEDs. However, neither combined nor individual teaching of Sommers, Arai et al. ('135) and Choi et al. ('188) discloses the white LEDs of the device including three primary color LED elements in a stacked arrangement facing in the direction of illumination.

On the other hand, Kimura et al. ('552) teaches a semiconductor light emitting diode assembly (Figures 1a-1e) including LEDs emitting red, green and blue color light,

and the LEDs adhered together forming a single chip (Figures 1a-1e, column 7, lines 32-40) configured in a stack format.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the photographic light source device of Sommers in view of Arai et al. ('135) and Choi et al. ('188) by providing stacked LEDs as taught by Kimura et al. ('552) for the benefits and advantages of compactness, and efficient mixing of light by getting the light of three primary colors emitted from the same portion of the LED device.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sommers (US Patent Application Pub. No.: US 2003/0180037 A1) in view of Arai et al. (US Patent No.: 5,287,135) and Choi et al. (US Patent No.: 5,313,188) as applied to claim 1 above, and further in view of Ishikawa et al. (US Patent No.: 6,179,447 B1).

Sommers in view of Arai et al. ('135) and Choi et al. ('188) discloses the light source device including a plurality of white light LEDs. However, neither combined nor individual teaching of Sommers, Arai et al. ('135) and Choi et al. ('188) discloses a photographic light source device including a lens with a convex surface and fresnel cuts.

On the other hand, Ishikawa et al. ('447 B1) teaches strobe light distribution lens including a surface with fresnel cuts, and a convex surface (Figures 2 and 4, column 2, lines 49-56).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the photographic light source device of Sommers, Arai et al.

('135) and Choi et al. ('188) by providing the convex lens with fresnel cuts as taught by Ishikawa et al. ('447 B1) for the benefits of making the lens thinner, and benefits of reduction in light losses produced by the fresnel cuts of the lens.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommers (US Patent Application Pub. No.: US 2003/0180037 A1) in view of Arai et al. (US Patent No.: 5,287,135) and Choi et al. (US Patent No.: 5,313,188) as applied to claim 1 above, and further in view of Kishikawa et al. (US Patent No.: 5,895,128).

Regarding Claim 8, Sommers in view of Arai et al. ('135) and Choi et al. ('188) discloses the light source device including a plurality of white light LEDs. However, neither combined nor individual teaching of Sommers, Arai et al. ('135) and Choi et al. ('188) discloses a photographic light source device including a voltage booster.

On the other hand, Kishikawa et al. ('128) teaches an electronic flash combined with a camera, and the combination including a booster circuit 142 (Figures 1 and 7, column 6, lines 10-13).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the photographic light source device of Sommers in view of Arai et al. ('135), Choi et al. ('188) by providing the voltage booster as taught by Kishikawa et al. ('128) for the benefits of boosting voltage of the control circuit.

Regarding Claim 9, Sommers in view of Arai et al. ('135), Choi et al. ('188) and Kishikawa et al. ('128) discloses the photographic light source device further including a inverter circuit with a voltage booster 142 (Figures 1 and 7, column 6, lines 10-13).

Allowable Subject Matter

8. Claims 11-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record, including Sommers, Arai et al. ('135) and Choi et al. ('188), does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose the photographic light source device combining:

- the photographic light source device of Claim 1 further having a convex lens with fresnel cuts, and the device disposed in a mobile telephone as recited in Claim 11;
- the camera light source device of Claim 2 further having a convex lens with fresnel cuts, and the device disposed in a mobile telephone as recited in Claim 14;
- the camera light source device of Claim 4 further having a convex lens with fresnel cuts, and the device disposed in a mobile telephone as recited in Claim 15; and
- the camera light source device of Claim 5 further having a convex lens with fresnel cuts, and the device disposed in a mobile telephone as recited in Claim 16.

The above-indicated combination, including: the photographic light device, meeting the limitations of any of claims 11 and 14-16, and the photographic light device disposed in a mobile telephone, makes this invention unique.

Claim 12 necessarily objected because of their dependency on the objected base Claim 11.

Claim 13 is necessarily objected because of their dependency on the objected base Claim 12.

Response to Amendment

9. Applicant's arguments filed on May 4, 2005 with respect to the 35 U.S.C. 103(a) rejections of claims 1-5 have been fully considered but are moot in view of the new ground(s) of rejections.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Ishikawa et al. (US Patent No.: 6,179,447) and Arai et al. (U.S. Patent No. 5,287,135

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S. Sawhney whose telephone number is 571 272 2380. The examiner can normally be reached on 6:15 - 2:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571 272 2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS
7/15/2005


Stephen Husar
Primary Examiner